

Claims 1-15 are now pending in this application. Claims 1-15 stand rejected.

The rejection of Claims 1-15 under 35 U.S.C. § 102(b) as being anticipated by Crowell et al. (US 5,859,482) (“Crowell”) is respectfully traversed.

Applicants respectfully submit that Crowell does not describe nor suggest the claimed invention. As discussed below and as agreed to during the Examiner Interview, at least one of the differences between Crowell and the present invention is that Crowell neither describes nor suggests a spacer bar having a notched side and at least one finger projecting outwardly from the notched side wherein the at least one finger is crimpable around a cooling conduit such that upon crimping the at least one finger extends circumferentially around the cooling conduit substantially surrounding the cooling conduit and mechanically coupling the spacer bar to the cooling conduit.

Crowell describes a liquid cooled electric motor stator frame (102) that includes a cooling conduit (142). Cooling conduit (142) is arranged in a generally helical configuration and stator frame (102) is cast around cooling conduit (142) such that conduit (142) is embedded within, and integral with, stator frame (102). A plurality of spacer bars (152) provide support for cooling conduit (142) and facilitate maintaining a desired spacing between a plurality of lengths of cooling conduit (142) and between conduit (142) and a stator frame wall.

Claim 1 recites a stator frame for an electric motor that includes a cooling conduit, and “at least one spacer bar comprising a notched side and at least one finger projecting outwardly from said notched side, said at least one finger crimpable around said cooling conduit such that upon crimping said at least one finger extends circumferentially around said cooling conduit substantially surrounding said cooling conduit and mechanically coupling said spacer bar to said cooling conduit.”

Crowell does not describe nor suggest a stator frame for an electric motor that includes at least one spacer bar having a notched side and at least one finger projecting outwardly from the notched side wherein the at least one finger is crimpable around a cooling

conduit such that upon crimping the at least one finger extends circumferentially around the cooling conduit substantially surrounding the cooling conduit and mechanically coupling the spacer bar to the cooling conduit.

Rather, Crowell describes a liquid cooled electric motor stator frame that includes a plurality of spacer bars that engage a cooling conduit. Although Crowell describes at column 5, lines 37-38; column 6, lines 46-49; and column 7, lines 8-11 spacer bars that are engaged to a conduit, Crowell does not describe nor suggest a spacer bar having a notched side and at least one finger projecting outwardly from the notched side wherein the at least one finger is crimpable around a cooling conduit such that upon crimping the at least one finger extends circumferentially around the cooling conduit substantially surrounding the cooling conduit and mechanically coupling the spacer bar to the cooling conduit. For at least the reasons set forth above, Claim 1 is submitted to be patentable over Crowell.

Claims 2-7 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-7 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-7 likewise are patentable over Crowell.

Claim 8 recites an electric motor that includes a cooling conduit, and “at least one spacer bar mechanically coupled to said cooling conduit, said spacer bar comprising a notched side and at least one finger projecting outwardly from said notched side, said at least one finger crimpable around said cooling conduit such that upon crimping said at least one finger extends circumferentially around said cooling conduit substantially surrounding said cooling conduit and mechanically coupling said spacer bar to said cooling conduit.”

Crowell does not describe nor suggest an electric motor that includes a cooling conduit, and at least one spacer bar mechanically coupled to a cooling conduit, wherein the spacer bar has a notched side and at least one finger projecting outwardly from the notched side, and wherein the at least one finger is crimpable around the cooling conduit such that upon crimping the at least one finger extends circumferentially around the cooling conduit substantially surrounding the cooling conduit and mechanically coupling the spacer bar to the cooling conduit.

More specifically, Crowell does not describe nor suggest a spacer bar having a notched side and at least one finger projecting outwardly from the notched side wherein the at least one finger is crimpable around a cooling conduit such that upon crimping the at least one finger extends circumferentially around the cooling conduit substantially surrounding the cooling conduit.

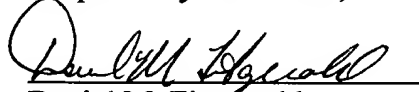
Rather, Crowell describes a liquid cooled electric motor stator frame that includes a plurality of spacer bars that engage a cooling conduit. Although Crowell describes a spacer bar that engages a cooling conduit, Crowell does not describe nor suggest a spacer bar having a notched side and at least one finger projecting outwardly from the notched side wherein the at least one finger is crimpable around a cooling conduit such that upon crimping the at least one finger extends circumferentially around the cooling conduit substantially surrounding the cooling conduit and mechanically coupling the spacer bar to the cooling conduit. For at least the reasons set forth above, Claim 8 is submitted to be patentable over Crowell.

Claims 9-15 depend, directly or indirectly, from independent Claim 8. When the recitations of Claims 9-15 are considered in combination with the recitations of Claim 8, Applicants submit that dependent Claims 9-15 likewise are patentable over Crowell.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-15 be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Daniel M. Fitzgerald

Registration No. 38,880

ARMSTRONG TEASDALE LLP

One Metropolitan Square, Suite 2600

St. Louis, Missouri 63102-2740

(314) 621-5070

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Applicant: Dunlap et al. | : | |
| | : | Art Unit: 2834 |
| Serial No.: 09/682,501 | : | |
| | : | Examiner: Tamai, K. |
| Filed: September 10, 2001 | : | |
| | : | |
| For: MECHANICAL JOINING FOR | : | |
| WATER-COOLED MOTOR | : | |
| FRAME | : | |

SUBMISSION OF MARKED-UP CLAIMS

Commissioner for Patents
Washington, D.C. 20231

Submitted herewith are marked up claims in accordance with 37 CFR 1.211(c)(1)(ii).

IN THE CLAIMS

1. (twice amended) A stator frame for an electric motor, said stator frame comprising:

a substantially cylindrical shaped body section having opposed ends, and a cooling passageway extending through at least a portion of said body section, said cooling passageway comprising a cooling conduit;

an inlet port and an outlet port in flow communication with said cooling passageway; and

at least one spacer bar comprising a notched side and at least one finger projecting outwardly from said notched side, said at least one finger crimpable around said cooling conduit such that upon crimping said at least one finger extends circumferentially around said cooling conduit [to said notched side] substantially surrounding said cooling conduit and mechanically coupling said spacer bar to said cooling conduit.

8. (twice amended) An electric motor, comprising:

a stator frame comprising a substantially cylindrical shaped body section having opposed first and second ends, and a cooling passageway extending through at least a portion

of said body section, said frame further comprising an inlet port and an outlet port in flow communication with said cooling passageway, said cooling passageway comprising a cooling conduit;

a first end shield secured to said first stator frame end;

a second end shield secured to said second stator frame end; and

at least one spacer bar mechanically coupled to said cooling conduit, said spacer bar comprising a notched side and at least one finger projecting outwardly from said notched side, said at least one finger crimpable around said cooling conduit such that upon crimping said at least one finger extends circumferentially around said cooling conduit [to said notched side] substantially surrounding said cooling conduit and mechanically coupling said spacer bar to said cooling conduit.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

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